

## ABSTRACT

In a cable modem system utilizing a DHCP to dynamically allocate an IP address to a subscriber terminal, a DHCP server address notifying portion of a cable modem termination system notifies a cable  
5 modem of a DHCP server address, a DHCP relay agent of the cable modem relays DHCP messages as a relay agent, an IP address detector detects the IP address from the DHCP message, an IP address storage stores the IP address, and a packet filtering portion discards a packet  
10 having a source IP address other than the IP address stored in the IP address storage when the packet is received from the subscriber terminal.